

### **Applicants' Summary of Examiner Interview**

The undersigned would like to thank Examiner Shang for the courtesies extended in the telephonic interview conducted with the undersigned on December 6, 2010. The undersigned generally discussed the recitations of claim 194 with respect to the Lu, et al. (U.S. 5,550,928) reference. While no specific agreement was reached, Examiner Shang indicated that the Lu reference would be reconsidered in view of the arguments provided in the interview and included in the following response to the Office action. The undersigned thanks Examiner Shang for his professionalism in advancing prosecution of the above-referenced patent application.

### **Applicants' Remarks**

The applicants have carefully considered the office action dated September 16, 2010, and the references applied to the claims. In view of the following remarks, it is respectfully submitted that all pending claims are in condition for allowance and favorable reconsideration is respectfully requested.

### **The Prior Art Rejections**

The Office action rejected the pending claims over Lu, et al. (U.S. 5,550,928) or a combination of Lu and Eldering, et al. (6,457,010). The applicants respectfully traverse these rejections.

Claim 194 recites, *inter alia*, determining a first probability that the first audience member is in the audience based on a first viewing count and a second viewing count. As described in more detail below, neither Lu nor Eldering teaches or suggests determining a first probability that the first audience member is in an audience based on a first viewing count and a second viewing count.

Lu is directed to an audience measurement system and apparatus. In particular, Lu describes a method for identifying individuals within a monitored area by: . . . b) counting the individuals within the monitored viewing area; c) locating a member in the monitored viewing area; d) computing a quantitative estimate that the located individual is one of the individuals who may be in the monitored area; e) performing steps c) and d) a number of times equal to the counted individuals in the monitored area to form a set of quantitative estimates; determining a maximum quantitative estimate of the set of quantitative estimates; comparing the maximum quantitative estimate with a predetermined threshold; assigning an identity label of “guest” to an individual in the monitored area who has a corresponding quantitative estimate which is less than the threshold value; and j) repeating steps f) through i) until all quantitative estimates in the set have been processed. *See Lu, 5:43-64.* While these steps are discussed in more detail in the Lu reference and are addressed below, none of these steps describes determining a first probability that the first audience member is in the audience based on a first viewing count and a second viewing count.

Lu describes generating a first facial identity estimate from a current video image by use of an estimate from a statistical identity estimate derived from an historical record indicating that predetermined individuals were present in a monitored area during selected past times. *See Lu, 6:1-10.* Lu also describes generating a probability look-up table based on historical tuning records of known viewers. *See Lu, 20:35-38.* The look-up table includes values  $F_n$  for each known viewer. The values  $F_n$  associated with each viewer are based on the historical tuning records stored in a tuning data file, and are a priori probabilities that a corresponding viewer is present under a given set of circumstances. *See Lu, 20:39-44.* As described in Lu, each of the values  $F_n$  for a given viewer may be equal to the ratio of a number of times that the given viewer

is present during a corresponding one of 672 quarter hours in a week to the total number of times that the corresponding quarter hour period was monitored. *See Lu, 20:44-49*. Lu does not teach or suggest, however, that  $F_n$  for a viewer is based on the number of times that another viewer is present and, therefore, does not teach or suggest determining a first probability that a first audience member is in an audience based on a first viewing count and a second viewing count.

Finally, Lu describes performing a Bayes classification to determine the probability that a viewer is watching the channel currently being viewed. *See Lu, 20:63-65*. The Bayes classification determines a weighted estimate of which of the known family members are likely to be in the viewing audience. *See Lu, 20:65-21:2*. The Bayes classification employs (i) the a priori probability that a viewer in the library is viewing the television set during the current quarter hour, (ii) the number of family members in the library, and (iii) an adjustable weighting factor to be assigned to the historical data. *See Lu, 21:3-8*. The probability value is stored in a statistical analysis file for each family member. *See Lu, 21:14-15*. This portion of Lu also does not teach or suggest determining a first probability that a first audience member is in an audience based on a first viewing count and a second viewing count, because the Bayes classification for each family member uses the a priori probability (discussed above) for that family member and not any other family members.

As discussed in previous responses, Eldering also does not teach or suggest determining a first probability that a first audience member is in an audience based on a first viewing count and a second viewing count. Therefore, no combination of Eldering and Lu can teach or suggest the recitations of claim 194. For at least the foregoing reasons, the applicants respectfully submit that claim 194, and all claims depending therefrom, are allowable.

Claim 200 recites machine readable instructions which, when executed, cause a machine to, *inter alia*, determine a first probability that a first audience member is in an audience based on a first viewing count and a second viewing count. As discussed above with reference to claim 194, neither Lu nor Eldering teaches or suggests determining a first probability that a first audience member is in an audience based on a first viewing count and a second viewing count. Accordingly, the applicants respectfully submit that claim 200 and all claims depending therefrom are allowable.

Claim 206 recites a measurement apparatus comprising a processor programmed to, *inter alia*, determine a first probability that a first audience member is in an audience based on a first viewing count and a second viewing count. As discussed above with reference to claim 194, neither Lu nor Eldering teaches or suggests determining a first probability that a first audience member is in an audience based on a first viewing count and a second viewing count. Accordingly, the applicants respectfully submit that claim 206 and all claims depending therefrom are allowable.

Claim 212 recites, *inter alia*, determining an expected number of audience members based on historical tuning information for known audience members during corresponding day parts in response to determining that a count of audience members is equal to a number of audience members associated with the stored audience information. Neither Lu nor Eldering teaches or suggests determining an expected number of audience members. To the contrary, Lu describes a counting sensor that can determine the number of occupants in a monitored viewing area. *See Lu*, 8:66-9:2. The counting sensor would reduce or eliminate the need to determine an expected number of audience members. Eldering also does not teach or suggest determining an

expected number of audience members. For at least this reason, the applicants respectfully submit that claim 212 is also allowable.

### **Conclusion**

In general, the Office action makes various statements regarding the pending claims and the cited references that are now moot in light of the above. Thus, the applicants will not address such statements at the present time. However, the applicants expressly reserve the right to challenge such statements in the future should the need arise (e.g., if such statement should become relevant by appearing in a rejection of any current or future claim).

Reconsideration of the application and allowance thereof are respectfully requested. If there is any matter that the examiner would like to discuss, the examiner is invited to contact the undersigned at the telephone number set forth below. Please direct all correspondence for this matter to the address associated with USPTO Customer Number 81905. The Commissioner is authorized to charge any deficiency in any fee due for the filing of this paper to deposit account number 50-2455.

Respectfully submitted,

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